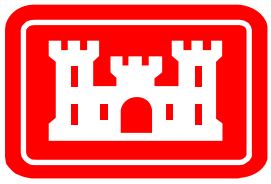
Roanoke River Basin
North Carolina and Virginia

Integrated Feasibility Report and Environmental Impact Statement for the John H. Kerr Dam and Reservoir, Virginia and North Carolina (Section 216) Study

DRAFT PEER REVIEW PLAN



US Army Corps of Engineers

Wilmington District

ACRONYMS & ABBREVIATIONS

AFB – Alternative Formulation Briefing

CESAW – US Army Corps of Engineers, South Atlantic, Wilmington

CWRB – Civil Works Review Board

ECO-PCX - National Ecosystem Planning Center of Expertise

EIS – Environmental Impact Statement

EPR – External Peer Review

FCSA – Feasibility Cost Sharing Agreement

FEIS – Final Environmental Impact Statement

FSM – Feasibility Scoping Meeting

GI – General Investigations

HQ – Headquarters

ITR – Independent Technical Review

LOI – Letter of Intent

NEPA – National Environmental Policy Act

OVEST -- Office of the Chief of Engineers Value Engineering Study Team

PDT – Project Delivery Team

PMP – Project Management Plan

PRP - Peer Review Plan

P&S – Plans & Specifications

SAD – South Atlantic Division

Walla Walla Dx - Walla Walla District Directorate of Expertise for Civil Works Cost Engineering

1.0 The Peer Review Plan

This Peer Review Plan (PRP) is a collaborative product of the project delivery team (PDT) and the National Ecosystem Planning Center of Expertise (ECO-PCX) and the Walla Walla District Directorate of Expertise for Civil Works Cost Engineering (Walla Walla Dx). The ECO-PCX and Walla Walla Dx shall manage the PRP, which for this study includes Independent Technical Review (ITR) only. External ITR is not deemed necessary for the initial review phase. Each of the following paragraphs (a. through j.) correspond to the guidance provided in paragraphs 6.a. through j. of Engineering Circular 1105-2-408, Planning - Peer Review of Decision Documents, 31 MAY 2005.

a. Decision Document and Team Members. The I*ntegrated Feasibility Report and Environmental Impact Statement for the John H. Kerr Dam and Reservoir (Section 216 Study), North Carolina and Virginia* shall be the decision document. The Feasibility Study, which is authorized under Section 216 of Public Law 91-611, the River and Harbor and Flood Control Act of 1970, as amended, will review the operation of the John H. Kerr Dam and Reservoir and report recommendations to Congress on the advisability of modifying the structures or the structures' operation and for improving the quality of the environment in the overall public interest. Information developed during the Feasibility Study may become the basis for actions specifically authorized by Congress or by the legislatures of the Sponsors, the State of North Carolina, and the Commonwealth of Virginia; addressed by the existing continuing authorities of the US Army Corps of Engineers; and for actions by non-government organizations (NGO). The Study provides interested parties an opportunity to integrate multiple perspectives and assets to achieve the common goal. The parties commit to effective and efficient management of their responsibilities for the Study, and to the sharing of information about the Study.

Prior to the initiation of this study, and Initial Appraisal was completed, with project funds, to determine in a preliminary way the subjects that needed addressed by a Section 216 Study. This lead to the completion of the reconnaissance study. In turn, approval of participation in this Feasibility Study by the US Army Corps of Engineers, Wilmington District, was based on the *Reconnaissance Phase Section 905(b) Analysis for John H. Kerr Dam and Reservoir, Virginia and North Carolina 216 and a Supplemental Sheet* prepared in response to comments on the 905(b) from the U.S. Army Corps of Engineers South Atlantic Division. These documents indicate that the Feasibility Study will address subjects determined in the Initial Appraisal Report for the Study, and identified by citizens during hearings held in the Study area. More than 40 topics were identified and categorized into 11 Study Subjects.

- ✓ Flow Regime and Effects on Riparian Ecosystem
- ✓ Water Quality
- ✓ Sedimentation and Channel Morphology
- ✓ Reservoir Resources
- ✓ Downstream Flow Based Recreation
- ✓ Salt Wedge
- ✓ Diadromous Fish
- ✓ Downstream Riverine Aquatic Resources
- ✓ Water Supply
- ✓ Operating Policies and Administrative Procedures
- ✓ Applicable Laws and Regulations
- ✓ Modeling Oversight

These tasks have been modified by combining the Downstream Aquatic Habitat task with the Diadromous Fish task to form the Diadromous Fish and Downstream Riverine

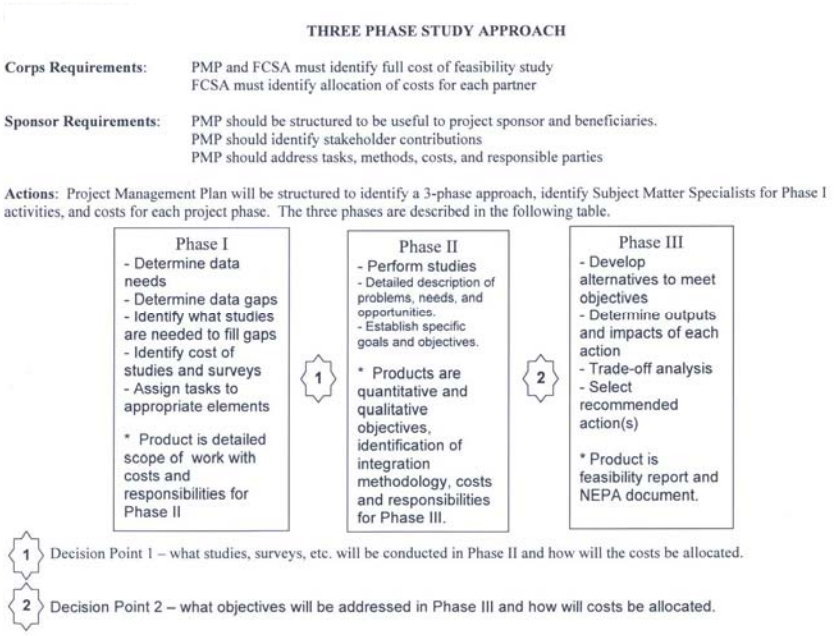
Aquatic Resources Task. The Applicable Laws and Regulations Task has been deferred until later in the Study process. There are 9 remaining study subjects to be addressed. Task implementation has been developed to consider each Study Subject. US Army Corps of Engineers Regulation 1105-2-100, Planning Guidance Notebook, provides full guidance regarding conduct of the study.

Study Area Description

The John H. Kerr Dam and Reservoir is located on the Roanoke River, 178.7 river-miles above the mouth. It is in Mecklenburg County, Virginia, 20.3 miles downstream from Clarksville, Virginia, 18 miles upstream from the Virginia-North Carolina border, and 80 air-miles southwest of Richmond, Virginia. The area of inundation at the top of the gate elevation for the Reservoir extends upstream on the Roanoke River 56 miles and extends 34 miles on the Dan River. The project was completed in 1952. John H. Kerr Reservoir is a significant regional resource. It provides quality natural resource-based recreation for area residents and a desirable outdoor experience for more than 2 million visitors a year. It provides municipal and industrial water supply, wastewater assimilation, and enhanced farming and forestry opportunities. The Roanoke River Basin below John H. Kerr Dam and Reservoir is one of the finest remaining river swamp forest ecosystems within the eastern United States. These bottomland hardwood forests, uplands, and streams provide a high quality habitat for fish, wildlife and waterfowl. The primary project purposes authorized by Congress were flood control and hydroelectric power generation.

The study area includes the John H. Kerr Dam and Reservoir and the Roanoke River Basin beginning at the Dam and proceeding downstream to the Albemarle Sound. For this study, the area will be referred to as the Lower Roanoke River Basin. The Study Area is located in Charlotte, Halifax, Mecklenburg, and Brunswick Counties of Virginia, and in Granville, Vance, Warren, Halifax, Northampton, Bertie, Martin and Washington Counties of North Carolina. Also a feasibility study under Section 216 is currently underway for Philpott Lake, 100 miles upstream of John H. Kerr Reservoir. The Project Delivery Teams for both studies will work closely together to assure that any changes are implemented system wide. The Philpott Lake study area includes Patrick, Franklin, Henry, and Pittsylvania Counties in Virginia, and Rockingham and Caswell Counties in North Carolina. The Kerr 216 study area is located in the 4th and 5th Congressional Districts in North Carolina and the 1st and 3rd Congressional Districts in Virginia.

The Phases of the Study



The John H. Kerr 216 Feasibility Study is being conducted in three phases (see above). The first phase details the plan for the Feasibility Study to the first major decision point, the first In-Progress Review (IPR). In the first phase of the Study, existing data about the Study Subjects was gathered, and recommendations for further study were developed. As the Study progressed, the PMP was modified to detail the plans for Phase 2 of the Work. Phase 2 is nearing completion and Phase 3 will commence in Fiscal Year 2009.

Upon completion of Tasks in Phase I, an IPR with the Sponsors, senior USACE representatives, and resource agency representatives was being conducted. The IPR included a Feasibility Scoping Meeting, as described in USACE Planning Guidance Notebook, Appendix G. The Feasibility Scoping Meeting ensured that the Study was correctly focused and that the essential Study objectives were addressed.

In Phase II of the Study, multiple technical studies addressing identified objectives are being performed to develop specific, quantitative, and qualitative goals and to assess existing problems, needs, and opportunities. Addressing identified objectives in Phase II via data collection, modeling, and analysis will set the stage for development of alternatives in Phase III.

In Phase III of the Study, alternatives will be developed and evaluated to meet the goals and objectives identified in Phase II. Outputs and impacts of each alternative will be determined, trade-off analysis performed, and, if appropriate, actions selected for recommendation to Congress. A feasibility report and National Environmental Policy Act documentation will be prepared.

All models developed or modified for use in this study will be subjected to ITR and will be certified as required by Engineer Circular (EC) 1105-2-407, U.S. Army Corps of Engineers. *Planning Models Improvement Program: Model Certification.*

All ITR's for all required outputs (reports and models) will be document using Dr. Checks in order to maintain a complete record or all comments and responses.

Key PDT members are shown in the table below.

ROLE	NAME	ORGANIZATION
Project Manager		SAW-PM-C
Program Manager		SAW-PM-P
Lead Planner		SAW-TS-PF
Lead Biologist		SAW-TS-PE
Biologist		SAW-TS-PE
Cultural Resources		SAW-TS-PE
Coastal H&H, Water Management		SAW-TS-EC
Coastal/H&H		SAW-TS-EC
Geographic Information Specialist		SAW-TS-EE
Geographic Information Specialist		SAW-TS-EE
Modeling Oversight		SAW-TS-EC
Real Estate		SAS-RE-RP
Contract Specialist		SAS-CT-P

For more information regarding the PRP, the project manager for the feasibility study may be contacted as follows:

US Army Corps of Engineers – Wilmington District
CESAW-PM-C
69 Darlington Avenue
Wilmington, North Carolina 28403

Independent Technical Review Team Leaders

National Ecosystem Planning Center of Expertise
US Army Corps of Engineers – Mississippi Valley Division
CEMVD-RB-T
http://eco-pcx.usace.army.mil/index.cfm

Walla Walla District Directorate of Expertise for Civil Works Cost Engineering
CENWW-EC-X

b. External Peer Review. EC 1105-2-408 provides the process for deciding whether or not to employ external peer review. The following is an excerpt of EC section 9.a: *Decision documents covered by this Circular will undergo EPR if there is a vertical team consensus (involving district, major subordinate command and Headquarters members) that the covered subject matter (including data, use of models, assumptions, and other scientific and engineering information) is novel, is controversial, is precedent setting, has significant interagency interest, or has significant economic, environmental and social effects to the nation. Decision documents covered by this Circular that do not meet the standard shall undergo ITR as described in paragraph 8, above.*

The vertical team will be included in all levels of review. The USACE, South Atlantic Division will receive the Draft feasibility report and will be involved in making the determination for level of review (i.e., Independent Technical Review and/or External Peer Review). This Peer Review Plan has been submitted to SAD. Coordination with

SAD has occurred, and it has been determined that External Peer Review is not necessary for the study in its current phase.

For this study, it has been determined that EPR is not required. Please see the External Peer Review Decision Checklist below (1 - 6).

1. Novel subject matter? No.

2. Controversial subject matter? No

3. Precedent setting? No

4. Unusually significant interagency interest? No

5. Unusually significant economic, environmental, and social effects to the nation? No

6. Implementation costs ($50,000,000) trigger EPR? No. The current estimate for PED is $1,460,000. Currently, construction costs are not to exceed the magnitude of $10,000,000 to $25,000,000; it is possible that no construction will be implemented, only recommendations for changes in project operations and flow releases from the project.

Decision: The PDT suggests that External Peer Review is not required. Independent Technical Review by a US Army Corps of Engineers team external to the project district, CESAW, will be sufficient to comply with the spirit of EC 1105-2-408, Planning - Peer Review of Decision Documents, dated 31 May 2005. It is not anticipated that any new methodologies will be used in the analysis and preparation of the Integrated Feasibility Report/EIS, nor that any of the data collected or analyzed would be considered influential scientific data.

c. Anticipated Study and Peer Review Schedule.

905(b) Report approved	May 2001
Sponsors' Advisory Committee formed	November 2001
PMP completed	January 2002
FCSA executed	June 2003
Technical work groups formed/Team leaders assigned	May 2004
Work groups complete Phase I scope of work (SOW)	March 2004
Begin Phase I – Prepare Scopes of Work	April 2004
Work groups complete SOW for Phase II (Except Water Supply)	July 2005
Work groups begin Phase II – Data Collection, Studies & Modeling	August 2005
Work groups complete Phase II (In-house Review and Executive Committee Approval)	September 2008
Work groups begin Phase III (Preliminary Plan Formulation)	May 2007
Independent Technical Review	**April 2010**
Feasibility Scoping Meeting (FSM) shouldn't this be done before the ITR and before this point?	June 2010
Work groups complete Phase III, ITR Complete	September 2010
Independent Technical Review	**January 2011**
Alternative Formulation Briefing (AFB)	March 2011
Final EIS / NEPA Public Review	June 2011
Final Report Complete and Submitted to Division/Headquarters	August 2011
Feasibility report approved by Division	September 2011
Civil Works Review Board	**December 2011**

d. Conducting External Peer Review. The relevant Planning Center(s) of Expertise will make the final determination as to whether or not External Peer Review is to be conducted. For this feasibility study, this decision is the responsibility of the ECO-PCX and the Walla Walla Dx.

e. Public Comment on Decision Document. Once completed, the Integrated Feasibility Report and EIS will be disseminated to resource agencies, interest groups, and the public as part of the National Environmental Policy Act (NEPA) environmental compliance review. Please note where "FEIS / NEPA Public Review" is highlighted in the "Peer Review Plan" flow chart included as Attachment 1. Public entities and private individuals may also review and comment on draft documents as members of the PDT.

f. Provision of Public Comments to Reviewers. All significant and relevant public comments will be provided as part of the review package to Peer Reviewers as they are available and may include but not be limited to: scoping letters, meeting minutes, other received letters, and emails.

g. Anticipated Number of Reviewers.** The relevant Planning Center(s) of Expertise shall make the final determination for the number needed of reviewers. For this feasibility study, this decision is the responsibility of the ECO-PCX and the Walla Walla Dx.

h. Primary Review Disciplines and Expertise. The number of reviewers (Level of Review) shall vary as depicted under "Review Phase" in the "Peer Review Plan" flow chart included as Attachment 1. The ECO-PCX and the Walla Walla Dx shall make the final determination for the discipline type and number needed of reviewers depending upon the "Review Phase."

PRELIMINARY REVIEW DISCIPLINES FOR ITR**	
Plan Formulation	The reviewer should have the ability to review the planning process which should address the Nation's water resources needs in a systems context and explore a full range of alternatives in developing solutions. The reviewer should be able to recognize innovative solutions and the application of the full range of the Corps programs and authorities are integral to the planning process. The reviewer should thoroughly understand the Planning Guidance Notebook (ER-1105-100) and the Water Resources Council's Principals and Guidelines.
Environmental / NEPA Compliance	The reviewer should be able to addresses the integration of environmental evaluation and compliance requirements, pursuant to national environmental statutes, applicable executive orders and other Federal planning requirements, into the planning of Civil Works water and related land resources comprehensive plans and implementation projects.
Hydrology & Hydraulics	The reviewer should have the ability to address river hydraulics and sediment transport, hydrologic statistics and risk analysis, reservoir system analysis, planning analysis, real-time water control management and a number of other closely associated technical subjects.
Cost Estimating	The cost estimating reviewer must be cost estimating specialist. It is imperative that estimates be prepared by, and reviewed under the supervision of, personnel who are competent in construction cost estimating. The reviewer must possess a working knowledge of construction and environmental restoration and be capable of making professional determinations based on their experience.

John H. Kerr Section 216 Feasibility Study proceeds, additional reviewing disciplines will be added.

i. Selection of External Peer Reviewers. The relevant Planning Center(s) of Expertise and associated Vertical Team shall make the final determination for the discipline type and number needed of reviewers as well as which if any External Peer Reviewers are needed. For this feasibility study, this decision is the responsibility of the ECO-PCX and the Walla Walla Dx.

j. Nomination of Peer Reviewers by the Public. The ECO-PCX and the Walla Walla Dx shall determine if Peer Reviewers will be nominated by the Public. The public

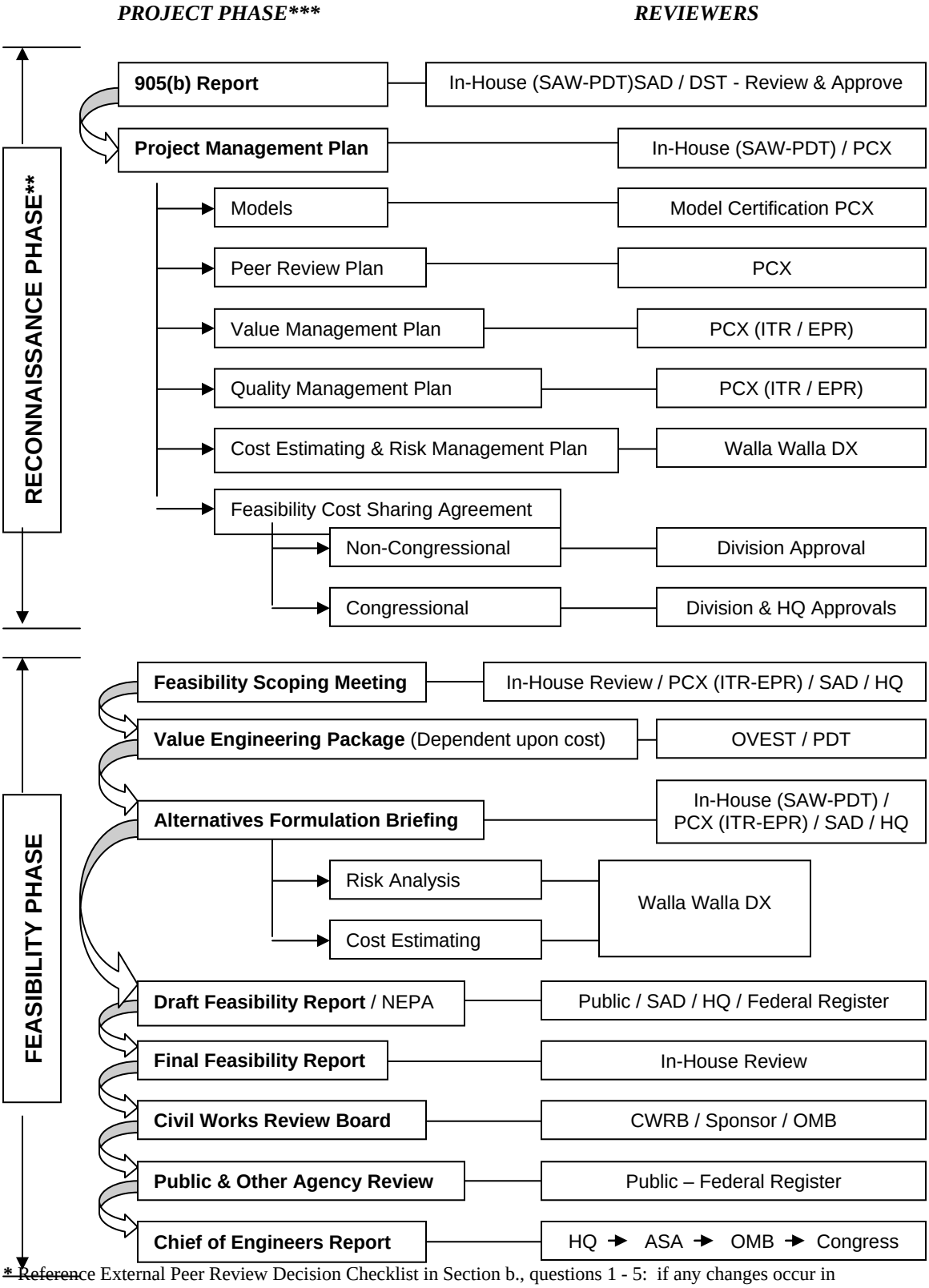
will have opportunities to review the Integrated Feasibility Report/EIS as required by the NEPA compliance process.

****** See Attachment 2

ATTACHMENT 1

PEER REVIEW PLAN

PEER REVIEW PLAN*



* ~~Reference~~ External Peer Review Decision Checklist in Section b., questions 1 - 5: if any changes occur in checklisted items, the vertical team will determine if External Peer Review (EPR) will be required. A decision regarding EPR is requested in writing from SAD and HQ Regional Integration Team Leader (RIT).

**A Scoping Letter during the Reconnaissance Phase provides the Public the opportunity to share any known concerns.

***The Project Delivery Team (PDT) includes the non-Federal Sponsor, stakeholders, and resource agencies.

ATTACHMENT 2

ITR APPROVAL REQUEST

Establishment of ITR responsibility has been an evolving process. Skilled and experienced personnel who have not been associated with the development of the John H. Kerr Feasibility Study products will be requested by Wilmington District Plan Formulation and Economics Section. The following disciplines have been identified during the initial process. Additional disciplines will be added as deemed appropriate.

- ✓ **Planning Formulation**
- ✓ **Economics/Cost Effectiveness and Incremental Analysis**
- ✓ **Hydraulic and Hydrology**
- ✓ **Environmental Restoration and NEPA Compliance**